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TECHNOLOGICAL ADVANCEMENT IN BANKING SECTOR IN INDIA: CHALLENGES AHEAD

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ABSTRACT

Over the last three decades the role of banking in the process of financial intermediation has been undergoing a profound transformation, owing to changes in the global financial system. India's banking system has seen some major financial innovations in the past decade as well as steps to promote financial inclusion, schemes that aim to take banking services to yet-to-be-banked areas. The various innovations in banking and financial sector are ECS, RTGS, EFT, NEFT, ATM, Retail Banking, Debit & Credit Cards, free advisory services, implementation of standing instructions of customers, payments of utility bills, fund transfers, internet banking, telephone banking, mobile banking, selling insurance products, issue of free cheque books, traveller's cheques and many more value added services. The major impetus for financial innovation has been globalization of financial systems, deregulation, and great advances in technologies. In increasingly integrated financial systems facing higher volatilities, more competition and wide varieties of risks, financial innovation has become an essence to provide new products and strategies to better suit different circumstances of time and market and to meet different requirements of participants in financial system. This paper studies about financial innovation in banking in India. It also highlights the benefits and challenges of innovative banking trends. Banks boost technology investment spending strongly to address revenue, cost and competitiveness concerns. The purpose of present study is to analyze such effects of innovation in banking on growth and development of India.

Keywords: Financial Inclusion, ATM, Retail Banking, Debit & Credit Cards

INTRODUCTION

Financial innovation in India is key to making growth inclusive by connecting hundreds of millions to the banking system, said panelists at the World Economic Forum's India Economic Summit. The deregulation of financial service industry and increased competition with in investment banking undoubtedly led to increased emphasis on the ability to design new products, develop better process, and implement more effective solution for increasingly complex financial problems. These financial innovations are a result of number of Government regulations, tax policies, globalization, liberalization, privatization, integration with the international financial market and increasing risk in the domestic financial market. Financial innovation is the process through which finance managers or intermediary institutions in financial markets add value to existing plain vanilla products that satisfy the user needs. According to John Finnerty, "Financial Innovation involves the design, the development, and the implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance". The various innovations in banking and financial sector are ECS, RTGS, EFT, NEFT, ATM, Retail Banking, Debit & Credit cards, free advisory services, implementation of standing instructions of customers, payments of utility bills, fund transfers, internet banking, telephone banking, mobile banking, selling insurance products, issue of free cheque books, travel cheques and many more value added services.

Intense competition among the banks has redefined the concept of the entire banking system. The banks are looking for new ways not only to attract but also to retain the customers and gain competitive advantage over their competitors. The banks like other business organizations are deploying innovative sales techniques and advanced marketing tools to gain supremacy. The main driver of this change is changing customer needs and expectations. Customers in urban India no longer want to wait in long queues and spend hours in banking transactions. This change in customer attitude has gone hand in hand with the development of ATMs, Mobile phone and net banking along with availability of service right at the customer's doorstep. With the emergence of universal banking, banks aim to provide all banking product and service offering under one roof and their endeavor is to be customer centric. While banks are striving to strengthen customer relationship and move towards 'relationship banking,' customers are increasingly moving away from the confines of traditional branch banking and seeking the convenience of remote electronic banking. Information technology and the communications networking systems have revolutionaries the working of banks and financial entities all over the world.

REVIEW OF LITERATURE

Financial innovations lower cost of capital, reduce financial risks, improve financial intermediation, and hence welfare enhancing. The primary function of financial system is to facilitate the allocation and deployment of economic resources in an uncertain environment (Merton, 1992). Financial innovation is helpful in ensuring smooth functioning and improves the overall efficiency of the system by minimizing cost and reducing risk. More generally, financial innovation has been a central force driving the financial system toward greater economic efficiency (Merton and Bodie 2005).Avasthi & Sharma (2000-01) have analyzed in their study that advances in technology are set to change the face of banking business. Technology has transformed the delivery channels by banks in retail banking. It has also impacted the markets of banks. The study also explored the challenges that banking industry and its regulator face. B. Janki (2002) analyzed that how technology is affecting the employees' productivity. There is no doubt, in India particularly public sector banks will need to use technology to improve operating efficiency and customer services. The focus on technology will increase like never before to add value to customer services, develop new products, strengthen risk management etc. the study concludes that technology is the only tool to achieve their goals. Hua G. (2009) investigates the online banking acceptance in China by conducting an experiment to investigate how users' perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. Jalan, B. (2003), IT revolution has brought about a fundamental transformation in banking industry. Perhaps no other sector has been affected by advances in technology as much as banking & finance. It has the most important factor for dealing with the intensifying competition & the rapid proliferation of financial innovations. Mittal, R.K. & Dhingra, S. (2007) studied the role of technology in banking sector. They analyzed investment scenario in technology in Indian banks but this study was related to the time period before the Information Technology Act and at that time technology in Indian banks was very low. But both the researchers nicely presented their views. Padhy, K.C. (2007) studied the impact of technology development in the banking system and he also highlights the future of banking sector. The core competencies will provide comparative advantages.

OBJECTIVES OF THE STUDY

1. To study the various financial innovation in banking sector.
2. To study the changing banking scenario.
3. To study the challenges of banks in changing banking scenario.

Status of Financial Innovations in Banking Sectors:

Today banking is known as innovative banking. Information technology has given rise to new innovations in the product designing and their delivery in the banking and finance industries. Customer services and customer satisfaction are their prime work. Current banking sector has come up with a lot of initiatives that oriented to providing a better customer services with the help of new technologies. Banking through internet has emerged as a strategic resource for achieving higher efficiency, control of operations and reduction of cost by replacing paper based and labour intensive methods with automated processes thus leading to higher productivity and profitability. Financial innovation associated with technological change totally changed the banking philosophy and that is further tuned by the competition in the banking industry. Challenging business environment within the banking system create more innovation in the fields of product, process and market. A study on the Internet users, conducted by Internet and Mobile Association of India (IAMAI), found that about 23% of the online users prefer IB as the banking channel in India, second to ATM which is preferred by 53%. Out of the 6,365 Internet users sampled, 35% use online banking channels in India.

The introduction of ATMs in banks has transformed banking by providing banking services ANY TIME & ANYWHERE, ANYBANK to the customer. The customer is saved the risk or bother of carrying hard cash or travelers' cheque while travelling. It has also given cost savings to banks. Entry of ATMs has changed the profile of front offices in bank branches. Customers no longer need to visit branches for their day to day banking transactions like cash deposits, withdrawals, cheque collection, balance enquiry etc. In 2010-11 the number of ATMs witnessed a growth of 24 per cent over the previous year. However, the percentage of off-site ATMs to total ATMs witnessed a marginal decline to 45.3 per cent in 2010-11 from

45.7 per cent in 2009-10. More than 65 per cent of the total ATMs belonged to the public sector banks as at end March 2011 as shown in Table 1.

Table 1. ATMs of Scheduled Commercial Banks (As at end-March 2011)

Sr. No	Bank group	On-site ATMs	Off-site ATMs	Total number of ATMs	Off-site ATMs as% of total ATM
I	**Public sector banks**	**29,795**	**19,692**	**49,487**	**39.8**
1.1	Nationalised banks*	15,691	9,145	24,836	36.8
1.2	SBI group	14,104	10,547	24,651	42.8
II	**Private sector banks**	**10,648**	**13,003**	**23,651**	**55.0**
2.1	Old private sector banks	2,641	1,485	4,126	36.0
2.2	New private sector banks	8,007	11,518	19,525	59.0
III	**Foreign banks**	**286**	**1,081**	**1,367**	**79.1**
All scb (I+II+III)		**40,729**	**33,776**	**74,505**	**45.3**

Source: Report on Trend & Progress of Banking 2010-11

Plastic money is the alternative to the cash or standard money. It is convenient to carry. The various Plastic money/cards include ATM cards, Debit Card, ATM cum Debit Card, Credit Card.

Plastic money was a delicious gift to Indian market. Now several new features added to plastic money to make it more attractive. Credit card is a financial instrument, which can be used more than once to borrow money or buy products and services on credit. Banks, retail stores and other businesses generally issue these. On the basis of their credit limit, they are of different kinds like classic, gold or silver.

Table 2. Debit Cards Issued by Scheduled Commercial Banks (As at end-March 2011)

(In Millions)

Sr. No.	Bank group	Outstanding Number of Debit Cards 2006-07	2007-08	2008-09	2009-10	2010-11
I	**Public sector banks**	**44.09**	**64.33**	**91.7**	**129.69**	**170.34**
	1.1 Nationalised banks	19.24	28.29	40.71	58.82	80.27
	1.2 SBI group	4.85	36.04	50.99	70.87	90.07
II	**Private sector banks**	**27.19**	**34.1**	**41.34**	**47.85**	**53.58**
	2.1 Old private sector banks	3.94	5.34	7.09	9.81	12.44
	2.2 New private sector banks	23.25	28.76	34.25	38.04	41.14
III	**Foreign banks**	**3.70**	**4.02**	**4.39**	**4.43**	**3.92**
	All SCBs (I+II+III)	**74.98**	**102.44**	**137.43**	**181.97**	**227.84**

Source: Report on Trend & Progress of Banking 2010-11

During 2010-11, the number of debit cards grew at the rate of 25 per cent over the previous year. In sync with the trend observed in case of ATMs, nearly three fourths of the total debit cards were issued by PSBs as at end March 2011. The share of PSBs in outstanding debit cards witnessed an increase during the recent years, while that of new private sector banks and foreign banks witnessed a decline over the same period. However, in absolute terms, the number of outstanding debit cards witnessed an increase for new private sector banks during the recent years (Table-2)

Table 3. Credit Cards Issued by Scheduled Commercial Banks (As at end-March 2011)

(In Millions)

Sr No	Bank group	Outstanding Number of Credit Cards 2006-07	2007-08	2008-09	2009-10	2010-11
I	**Public sector banks**	**4.14**	**3.93**	**3.44**	**3.26**	**3.08**
	1.1 Nationalized banks	0.75	0.72	0.72	0.73	0.78
	1.2 SBI group	3.39	3.21	2.72	2.53	2.30
II	**Private sector banks**	**10.68**	**13.29**	**12.18**	**9.5**	**9.32**
	2.1 Old private sector banks	0.03	0.04	0.06	0.06	0.04
	2.2 New private sector banks	10.65	13.25	12.12	9.44	9.28
III	**Foreign banks**	**8.31**	**10.33**	**9.08**	**5.57**	**5.64**
	All SCBs (I+II+III)	**23.12**	**27.55**	**24.70**	**18.33**	**18.04**

Source: Report on Trend & Progress of Banking 2010-11

The issuance of credit cards facilitates transactions without having to carry paper money. Despite the decline in the number of outstanding number of credit cards, the volume and value of transactions with credit card recorded a growth of 13 per cent and 22 per cent, respectively in 2010-11. New private sector banks and foreign banks accounted for more than 80 per cent of the total outstanding credit cards as at end March 2011 (Table 3)

RTGS stands for Real Time Gross Settlement system. It is a fund transfer mechanism where transfer of money takes place from one bank to another on a real time and on gross basis. This is the fastest possible money transfer system through the banking channel. It is different from EFT and NEFT. It is primarily for large volume transaction. The time taken for effecting funds transfer from one account to another is normally 2 hours. Over the last three decades the role of banking in the process of financial intermediation has been undergoing a profound transformation, owing to changes in the global financial system.

Table 4. Volume and Value of Electronic Transactions* by Scheduled Commercial Banks (As at end-March2011)

Year	2009-10 Volume	2010-11	2009-10 Percentage Variation	2010-11	2009-10 Value	2010-11	2009-10 Percentage Variation	2010-11
1	2	3	4	5	6	7	8	9
ECS Credit	98.1	117.3	11.0	19.5	1,17,613	1,81,686	20.6	54.5
ECS Debit	149.3	156.7	-6.7	5.0	69,524	73,646	3.8	5.9
NEFT	66.3	132.3	106.3	99.5	4,09,507	9,39,149	62.5	129.3
RTGS	33.2	49.3	148.5	48.2	3,94,53,359	4,84,87,234	22.2	22.9

Source: Report on Trend & Progress of Banking 2010-11

Note: *: Excluding transactions carried out through cards

The electronic payment systems such as Electronic Clearing Service (ECS) credit and debit, National Electronic Fund Transfer (NEFT) for retail transactions and Real Time Gross Settlement (RTGS) for large value, improved the speed of financial transactions, across the country. Both retail and large value systems of electronic payment transactions registered a growth out of which NEFT registered a steep growth in 2010-11 over the previous year (Table 4)

Challenges Ahead

Developing or acquiring the right technology, deploying it optimally and then leveraging it to the maximum extent is essential to achieve and maintain high service and efficiency standards while remaining cost effective and delivering sustainable return to shareholders. Early adopters of technology acquire significant competitive advances. Managing technology is therefore, a key challenge for the Indian banking sector. The nationalize banks and commercial banks have the competition from foreign and new private sector banks. Competition in banking sector brings various challenges before the banks such as product positioning, innovative ideas and channels, new market trends, cross selling at managerial and organizational part. Banks are restricting their administrative folio by converting manpower into machine power i.e. banks are decreasing manual powers and getting maximum work done through machine power. Skilled and specialized man power is to be utilized and result oriented targeted staff will be appointed.

In India, currently, there are two types of customers – one who is a multi-channel user and the other who still relies on a branch as the anchor channel. The primary challenge is to give consistent service to customers irrespective of the kind of channel they choose to use. Retention of customers is going to be a major challenge. Banks need to emphasis on retaining customers and increasing market share. Information technology poses both opportunities and challenges. Even with ATM machines and Internet Banking, many consumers still prefer the personal touch of their neighbourhood branch bank. Technology has made it possible to deliver services throughout the branch bank network, providing instant updates to checking accounts and rapid movement of money for stock transfers. However, this dependency on the network has brought IT department's additional responsibilities and challenges in managing, maintaining and optimizing the performance of retail banking networks. Illustratively, ensuring that all bank products and services are available, at all times, and across the entire organization is essential for today's retails banks to generate revenues and remain competitive. Besides, there are network management challenges, whereby keeping these complex, distributed networks and applications operating properly in support of business objectives becomes essential. Specific challenges include ensuring that account transaction applications run efficiently between the branch offices and data centers. Banks in India will now have to work towards a vision to have an enhanced retail delivery system. Such a system would include transformed branches, enhanced telephone services, and leading-edge internet banking functions that provide a consistently positive multi-channel experience for the customer. Some of the challenges that the banks are facing today are:

- Changing needs of customers.
- Coping with regulatory reforms.

- Restructuring and reorganizing banks' setup towards thinner and leaner administrative offices;
- Closing down and/or merging of unviable branches particularly in urban and metropolitan branches;
- Thinning spread.
- Maintaining high quality assets.
- Management of impaired assets.
- Keeping pace with technology up-gradations.
- Sustaining healthy bottom lines and increasing shareholder value

The Indian banking sector is faced with multiple and concurrent challenges such as increased competition, rising customer expectations, and diminishing customer loyalty. The banking industry is also changing at a phenomenal speed. While at the one end, we have millions of savers and investors who still do not use a bank, another segment continues to bank with a physical branch and at the other end of the spectrum, the customers are becoming familiar with ATMs, e-banking, and cashless economy. This shows the immense potential for market. Banks are setting up alternative delivery channels to contain operating costs like off-site ATMs, internet banking, telebanking, outsourcing, centralized transaction processing, etc. No doubt, the benefits of technology have brought a sea-change in the outlook of modern banking. Maintaining transparency and market disclosure of critical information such as risk profile, capital adequacy, and liquidity management have made banking institutions more accountable and responsive to the well-informed customers, investors, and public at large.

In this complex and fast changing environment, the only sustainable competitive advantage is to give the customer an optimum blend of technology and traditional service With technology occupying a pivotal role in delivery of banking services, the expectations of the consumer have also been growing. Broadly, these expectations are swift service with minimal response time, efficient service delivery, tailor-made and value-added products to suit specific needs, hassle-free procedures and minimum transaction costs, and pleasant and personalized service. As different classes of customers have different expectations from the banks, we need to adopt a segmented approach to study the expectations of the consumers. For this purpose, consumers may be broadly categorized into corporate, institutional clients, high net worth individuals, and retail consumers. As already noted, banks have to profile their customers and segment them based on age/life cycle stage, income and occupation, needs and preferences based on customer feedback and market research. They have to analyse the different financial needs occurring across various life cycle stages and, accordingly, bundle out banking products to cater to their needs so as to sustain relationships over time. Banks need a focused marketing approach as warranted by the segment to which it caters to. Basically, the marketing plan of banks should focus on brand building and individual product marketing. This must be achieved through appropriate media planning.

CONCLUSION

The banking sector in India has undergone significant transformation in the past few years. A conducive macro-economic environment, the landmark foreclosure law, falling interest rates, ample liquidity in the system, the fast spreading technological revolution, and huge potential in the retail segment augur well for Indian banks. However, the numerous challenges faced by banks such as increasing competition, pressure on spreads, and systemic changes to align with international standards have necessitated a re-evaluation of strategies and processes in order to remain competitive in this dynamic environment. As per the census records, only 30.1 per cent of the rural households are availing banking services. One of the reasons may be non-availability of bank branches in the neighbourhood. The existing rural branches of many of the big banks are being closed as they have become unviable. Banks need to think ‘out-of the box’ where box is the representation of all the tested, tried things that always worked in the past. They would have to think outside the boundaries of current practices, products, services, organizations, and industries as they fall behind the treadmill of faster and more rapid pace of change. The new business environment thus puts a premium on creativity and innovation more than ever before. This calls for innovative solutions. Banks may have to go for mobile banking services for a cluster of villages. Alternatively, technological institutions have to come out with low-cost, self-service solutions/ ATMs. The government and the RBI should actively support such research efforts.

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